



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,447	04/07/2000	Richard W. Cita	7163	9913

28574 7590 07/15/2004

ZENITH ELECTRONICS CORPORATION
2000 MILLBROOK DRIVE
LINCOLNSHIRE, IL 60069

EXAMINER

BAYARD, EMMANUEL

ART UNIT PAPER NUMBER

2631

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,447

Applicant(s)

CITTA ET AL

Examiner

Emmanuel Bayard

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 is/are allowed.
- 6) ☒ Claim(s) 15-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to amendment filed on 4/29/04 in which claims 1-38 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 15-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Pal U.S. Patent no 6,353,629 B1.

As per claims 15 and 26, Pal discloses a method of substantially eliminating a ghost of a received main signal and reducing noise enhancement comprising the following steps: a) ADC (see figs. 3-4 elements 302, 308, 406, 410) for processing the received main signal and the noise

Art Unit: 2631

or interference or distortion is the same as the claimed (ghost) (see col.5, lines 40-45 and col.6, line 47 and col.8, lines 55-60) along n paths to produce n processed main signals and n processed ghosts, wherein each of the n paths includes a corresponding finite filter (see figs. 3-4 elements 306, 310, 408, 412 and col.5, lines 45-46 and col.6, lines 49-60 and col.8, lines 53-60 and col.9, lines 1-45) wherein the processing along each of the n paths does not substantially eliminate the ghost, wherein $n > 3$ (is inherently included into Pal), and wherein the processing along at least some of the n paths includes shifting data (see fig.5 elements 82, 102 and col.3, lines 45-67 and col.8, lines 1-14); and, b) adding the n processed main signals and the n processed ghosts such that, because of the addition of the n processed main signals and the n processed ghosts, the ghost of the received main signal is substantially eliminated (see figs. 3-4 elements 312, 414 and col.3, lines 56-60 and col.8, lines 20-, 48-50 and col.9, lines 1-45).

As per claim 16, Pal inherently includes a down sampling step.

As per claims 17, 25, 27, 34 the method of Pal inherently includes the step of applying a spectral transformation prior to step a.

As per claims 18-23, 28-33, the method of Pal inherently includes the step of c) applying pre-processing coefficients to the received main signal and the ghost prior to step a) as to reduce and minimize the noise effects of the different antennas.

As per claims 36-37, the method Pal inherently includes wherein n is an odd integer, wherein half of the $n - 1$ data shifters shifts data in the data blocks to the left, and wherein half of the $n - 1$ data shifters shifts the data in the data blocks to the.

As per claim 38, the method of Pal inherently includes wherein $n > 4$.

Allowable Subject Matter

1. Claims 1-14 are allowed over the prior art of record.
2. The following is a statement of reasons for the indication of allowable subject matter: the prior art of Kennedy and Gardner in combination fail to anticipate or render obvious the following recited features: complex multiplying each of the left shifted data blocks by a first set of equalizer coefficients to provide first adjusted output data blocks, wherein step b) is not a full solution to ghosts; c) complex multiplying each of the input data blocks by a second set of equalizer coefficients to provide second adjusted output data blocks, wherein step c) is not a full solution to ghosts; e) complex multiplying each of the right shifted input data blocks by a third set of equalizer coefficients to provide third adjusted output data blocks, wherein step e) is not a full solution to ghosts as recited in claim 1.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour, can be reached on (703) 306-3034. The fax phone number for this Group is (703) 872-9314.

Application/Control Number: 09/545,447

Page 5

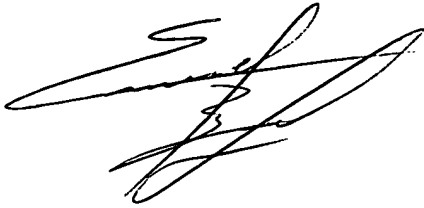
Art Unit: 2631

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Emmanuel Bayard

Primary Examiner

July 9, 2004

A handwritten signature in black ink, appearing to read 'Emmanuel Bayard', with a large, sweeping flourish at the end.